ABSTRACT OF THE DISCLOSURE

A global positioning system (GPS) receiver is provided, comprising a converter for converting received GPS signals to in-phase (I) and quadrature-phase (Q) digital signals; a correlator for generating expected codes and correlating the I and Q digital signals with the expected codes to output sampled I values and sampled Q values for a tap; a filter for filtering the sampled I values and sampled Q values to modified I values to each of the modified Q values, and for adding each of the modified I values to each of the corresponding modified Q values of the tap, and for outputting a count for sum which is positive; a counter for incrementing a counter value upon each count received from the filter; and a comparator for comparing the counter value to a threshold value upon completion of measure of values of the tap for determining the presence of a peak.